

Penn State Student Chapter Sponsors Lecture by Professor Kingery

In September 1987, the MRS Penn State Student Chapter sponsored a lecture on the applications of ceramic science in archaeology and art history. The speaker was Prof. W.D. Kingery of Massachusetts Institute of Technology. Author of over 200 papers and several books, including *Introduction to Ceramics* (with H.K. Bowen and D.R. Uhlmann), Kingery has made contributions in the fields of ceramic science, ceramic technology, and ceramic education, as well as in metallurgy, materials science, glaciology, and most recently in archaeology and art history.* His lecture, "A Role for Ceramic Material Science in Art History and Archaeology," discussed how an understanding of the microstructure and macrostructure of a ceramic object can lead to a better understanding of the processes used in its manufacture as well as the resulting visual effects. With the recent development of powerful analytical techniques, we can obtain detailed information on the chemical composition and the phases present in a ceramic object. This information allows us to infer the probable starting materials and processes used in its fabrication. Other techniques which reveal the microstructure help explain the resulting visual effects such as transparency, gloss, and iridescence. Ultimately, an understanding of the technology used to produce ceramic objects can give new insights into the culture and history of the people who fashioned them.

In other activities, the Penn State Student Chapter heard Dr. Richard L. Hanson, University patent attorney, speak on technical patent rights and patent procedures at the May meeting. In June, the Chapter toured the University's Computation Center and heard presentations by the staff on graphics, document processing, and supercomputing. The meeting in early September included a tour of the Chemistry Department's molecular beam epitaxy and angle-resolved SIMS facilities. This was followed by a tour of the Biology Department's electron microscopy facility at the October meeting. The applications of SEM and TEM in biology and biomaterials were discussed as was sample preparation. November's meeting included a talk by Prof. Rustum Roy, professor emeritus of solid state science and past director of the Penn State Materials Research Laboratory. In his talk on "Materials by Design," Roy described how the discovery of new materials and processes is often a mixture of careful planning and serendipity. Examples were given in the



Prof. W.D. Kingery (center), guest lecturer at the September meeting of the Penn State Student Chapter, and Student Chapter members (left to right): Paul Sliva, Mary Bliss, Michael Silsbee, and Eric Plesko.

areas of low thermal-expansion ceramics, the preparation of ultrafine powders, high T_c superconductors, and nanocomposites.

The November meeting also saw the election of the 1988 Student Chapter officers: Theresa A. Guiton, president; Cheryl M. Vaughan, vice-president; Julia A. Kraus, treasurer; and Richard A. Steinke, secretary. After the elections, outgoing president Paul Sliva prepared "high-tech" ice cream—a mixture of milk, heavy cream, syrup, eggs, fruits, and walnuts—chilled in a bath of liquid nitrogen.

Programs planned for the Spring include a trip to the Corning Glass Works (State College, PA) and a workshop on

proposal writing. For further information on the Penn State Student Chapter and its activities, please contact:

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Telephone: (814) 863-2835

Eric P. Plesko
Student Chapter Program Committee

**Editor's Note: Prof. W.D. Kingery is a chair for Session L2 on the "Technology of Ancient Ceramics" during Symposium L on Materials Issues in Art and Archaeology at the MRS 1988 Spring Meeting in Reno.*

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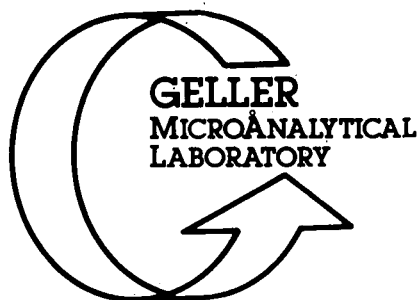
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EQUIPMENT EXHIBIT

April 5-7, 1988 ■ Goldwyn Pavilion ■ Bally's Reno

1988 MRS Spring Meeting ■ Reno, Nevada

Show Hours: Tuesday Noon-7:00 p.m.*
Wednesday 9:00 a.m.-5:00 p.m.
Thursday 9:00 a.m.-2:00 p.m.

1988 MRS SPRING SHOW EXHIBITORS (as of February 8, 1988)

- | | |
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*A reception for MRS meeting attendees and participants will be held Tuesday from 5:00-7:00 p.m.

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at the MRS Show in Reno, April 5-7, 1988.

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For further information please contact:

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In addition to invited presentations on Electronic Materials, Processing, and Characterization, contributed talks of 15 to 20 minutes will be considered for the program.

General Topics:

Metallization
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Advanced manufacture and processing technology
Characterization
Epitaxy and deposition
II-VI and III-V compound semiconductors
Particles/contamination
Optoelectronics

Other program highlights include an evening tutorial on materials characterization, a vendor exhibition, and two student paper awards. For further details on the symposium and vendor exhibition, or for information on contributing papers, please contact the symposium organizers:

Marylyn Bennett (214) 995-0821
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